

Title: Stand alone – but still integrated...
Topic: UNITOWER-Sheet Metal Storage and Retrieval System in use ...
Press text 47-2006-E / October 2006



Sub-Title: Metal distributor purchases additional sheet metal storage system with more than 100 storage locations as docking solution to existing building

Text:

With three locations in Germany, the metal distributor Damstahl GmbH is one of the important members of the worldwide active family-business Neumo-Ehrenberg-Group. With the departments stainless materials, seamless and welded tubes, bar stock, tube accessories and sheet metals as well as the first-level processing of semi-finished parts for prefabricators, the company is working since 1960 out of Langenfeld. Due to constantly increasing business, especially in the segment stainless steel sheets, it became necessary over time to re-examine the sheet metal logistics and to streamline it. Oliver Kamp, Production Manager of Damstahl GmbH in Langenfeld, contacted the relevant suppliers in order to find the optimum logistics solution. From previous contacts with KASTO, Oliver Kamp knew that KASTO is not only one of the market leaders when cutting of metals is required but also well-known for high-rise storage and retrieval systems as well as for handling and material flow of bar stock and flat products. First discussions took place during an exhibition, afterwards specifications or requirement profiles were established.

The task

So far, small, medium and large stainless steel sheets were stored in a rented location near Düsseldorf and were distributed from there. The costs for 2 locations and the extra costs for logistics had to be reduced and the entire storage and logistics sequence for stainless steel sheets needed to be updated. Problem was that the existing and actually large dimensioned buildings at the future central location in Langenfeld were not sufficient to accept a storage and retrieval system with approx. 100 locations for the stainless steel sheets. The application and project engineers from KASTO recommended therefore a so-called docking station, a tower storage system UNITOWER in double tower or double shelf design with an operating gantry crane, which is located in the center aisle. Damstahl ordered the storage system from KASTO turnkey including the housing – roof and wall cladding – as a rack supported building as an addition to the existing storage building. Another problem was the ambitious time frame for a quick realization of this investment plan.

The solution

The storage and retrieval system UNITOWER B 2.5 at Damstahl GmbH in Langenfeld has two shelf blocks with cassettes or pallet loads of 2,5 tons. Designed as a space-saving double shelf, the operating gantry crane moves between both shelf blocks to dynamically store and remove the cassettes/pallets/sheets. The entire automatic storage system UNITOWER is completely housed with roof and walls. The shelf construction of the 20 m high storage systems also acts as a supporting unit for the cladding. The usable dimensions of the pallets are 3.000 x 1.500 x 250 mm (l x w x loading height); cassettes can also be stored. Altogether, 103 storage locations are available. If one calculates the possible and admissible load per pallet/storage location times the number of locations, one can see clearly that Damstahl GmbH now can store approx. 250 tons of stainless steel sheets on a very small footprint. The automatic sheet metal storage system is equipped with a lateral cart system and a pallet deposit location for storing and removing. An optical contour control avoids storing of not properly loaded cassettes or of cassettes, which are too large.

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Sequence and system integration

The automatic sheet metal storage system UNITOWER B 2.5 at Damstahl GmbH is controlled and operated via the KASTO EasyControl with ID-number management. The control itself is designed for either automatic or manual operation. The storage system works together with a sheet stacking system. KASTO took care of the necessary modifications as well as the integration. According to Oliver Kamp, this investment in the sheet metal storage and retrieval system as well as the integration of the sheet stacking system has by far paid itself. There are no redundant logistics or transport jobs, the compact high-rise storage has replaced the conventional floor storage, which needs lots of space, the sheet handling takes mostly place automatically and with much less personnel and the sheets are no longer damaged, which has led to quite a few of complaints before, because now, the sheets are not only stored properly but certain handling sequences have been eliminated altogether.

Captions:



Picture 1
Shows the UNITOWER Storage System for sheet metal docked to the outside building wall at Damstahl



Picture 2
Shows the loading traverse with pulling unit for the sheet metal pallets as well as the vertical guide and the robust chain hoist



Picture 3
Shows the commissioning location for sheet metal with a lateral cart and a sheet restacking system